DUDEK

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31 May 2009 5218-30145

Brad Hess
Assistant Administrator
Santa Barbara Cancer Center
540 West Pueblo Street
Santa Barbara, California 93105

Re: Update and Revision to the Draft Biological Resources Summary and Biological Recommendations for New Construction on Cancer Center of Santa Barbara Property, Santa Barbara, California

Dear Mr. Hess:

The City of Santa Barbara in their May 19, 2009 Development Application Review Team Comment Letter requested Dudek amend the project biological inventory report to include a habitat assessment for Southern Steelhead Trout to address the reach of Mission Creek adjacent to the Cancer Center property. An update to the baseline biological conditions on-site was also recommended. Accordingly, Dudek conducted additional literature review and an updated site visit of the subject property on 29 May 2009 to examine existing and potential biological resources constraints in relation to proposed Cancer Center site development. This letter report describes the results of the literature search and survey, providing a general description of existing natural resources, the potential for sensitive biological resources to occur, and biological constraints resulting from the presence of, or potential for, these resources. Recommendations are also identified in order to ensure compliance with policies and ordinances for natural resource protection, and to assure avoidance of the potential for impacts to sensitive resources that could occur from the implementation of the proposed activities.

METHODS AND SURVEY LIMITATIONS

A query of the California Natural Diversity Database (CNDDB) was performed initially and literature including U.S. Fish and Wildlife Service (USFWS) species occurrence data, Critical Habitats, and other pertinent and available technical data were reviewed prior to the field visit. Dudek biologist FM Obregon conducted an updated general biological reconnaissance survey of the subject property on 29 May 2009. The purpose of the survey was to characterize the general floral and faunal conditions of the site, and evaluate the site for sensitive resources potential. The potential for sensitive plants and animals to occur onsite was assessed based on vegetation

EXHIBIT G

and habitat quality and the distribution and range of sensitive species known to occur in the region. The potential for the area to serve as a wildlife corridor also was evaluated. The site visit was sufficient for characterization of resources; however the survey was not timed for plant flowering periods or bird breeding season. A formal delineation of waters was not deemed necessary because no new structural development is planned to occur within a 50-feet buffer of the top of bank of Mission Creek, which is heavily channelized with armored bank stabilization.

A general inventory of plant and animal species detected within the subject property was compiled (*Appendix A*). Observable sensitive resources including perennial plants and wildlife and their sign were recorded that are recognized as sensitive by the California Native Plant Society (CNPS), the California Department of Fish and Game (CDFG), and the U.S. Fish and Wildlife Service (USFWS). No focused surveys for sensitive plants or wildlife species were conducted.

PROJECT SITE DESCRIPTION

The subject property is located between West Pueblo Avenue and Junipero Street within the incorporation limits of the City of Santa Barbara, California (*Figure 1*). The study area lies within the Santa Barbara U.S.G.S. Quadrangle. The southern edge of the property abuts Mission Creek.

The site is within a broad, gently-sloping alluvial plain of primarily Quaternary deposits, with ground elevation increasing generally south to north, from a low point of 138 feet on the south to 144 feet above mean sea level on the north. Land uses within the Project study area and on adjacent land included recreational, medical facility, commercial, educational (pre-school) and residential housing.

RESULTS

VEGETATION COMMUNITIES AND LAND COVERS

The site is heavily influenced by historic and current and urbanization. The majority of the site is developed and contains structures, paved areas, and landscape plants. Remnant natural vegetation, comparing favorably to coast live oak woodland (California Natural Community ID 71.060.19) and California sycamore-coast live oak (61.312.01), exists on the site and is integrated within paved parking and residential/commercial landscaping. The portion of Mission Creek within the

study area including the armored bank contains western sycamores intermixed with ornamental trees such as wattle (*Acacia* sp.), with an understory dominated by big-leaf periwinkle (*Vinca minor*), sorrel (*Oxalis* sp.), and non-native grasses. Upland areas within the site are essentially developed, paved, or landscaped, dominated by coast live oaks and including a variety of ornamental plants and trees. Ruderal portions of the site in vacant areas along the north-northeast boundary contain a diversity of weedy species including Bermuda grass (*Cynodon dactylon*), ripgut grass (*Bromus diandrus*), spotted spurge (*Chamaesyce maculate*), Mediterranean barley (*Hordeum marinum*), sow thistle (*Sonchus* sp.), sorrel, filaree (*Erodium* sp.), smilo grass (*Piptatherum miliaceum*), scarlet pimpernel (*Anagallis arvensis*), round leaf mallow (*Malva parviflora*), and English ivy (*Hedera helix*).

SENSITIVE BIOLOGICAL RESOURCES

SENSITIVE PLANT SPECIES

Prior to the field studies, the site was evaluated in the context of the California Natural Diversity Database (CNDDB). The suitability of the site to support sensitive plant species was evaluated based on geographic location, soils, and habitats present during the survey. The results of this evaluation are presented in *Table 1*, attached. No sensitive plant species were observed during the survey. Further, no sensitive plants are expected to occur within the construction area because of the high levels of development and disturbance.

OAK TREES

Oak trees have no state or federal status, but are protected under the Santa Barbara County Deciduous Oak Tree Protection and Regeneration Ordinance (Ordinance No.4490) and CEQA (PRC 21083.4). The site contains numerous specimen coast live oak (*quercus agrifolia*) trees, primarily located as landscape components in parking lots and adjacent to existing structures.

SENSITIVE WILDLIFE SPECIES

No sensitive wildlife species were detected during the survey of the property. The suitability of the site based on geographic location and habitats present to support sensitive wildlife species was evaluated during the survey. The results of this evaluation are presented in *Table 2*, attached.

Cooper's hawk (*Accipiter cooperi*) have moderate potential to utilize the site for roosting and foraging and a very low potential for breeding, while Monarch butterfly (*Danaus plexippus*) may potentially roost in suitable trees such as the Torrey pines located within the site. In addition, a

number of avian species could occur within the project area briefly and periodically as foraging migrants and a few avian species could nest within trees onsite.

POTENTIAL JURISDICTIONAL WETLANDS AND NON-WETLAND WATERS OF THE U.S./STATE

No formal delineation of waters was performed for this effort; however Mission Creek is a mapped blue-line stream. Mission Creek at this location has been historically heavily modified into a "U"-shaped channel by concrete and rock armoring. The project as currently designed would avoid Mission Creek; the closest point of construction to Mission Creek (529 West Junipero Street) is separated from the creek by existing development which will be retained. The proposed construction is significantly separated from the top of bank by as much as 100-140 feet.

ENVIRONMENTALLY SIGNIFICANT UNITS

The Project Site is located within the South Coast Hydrologic Unit and adjacent to Mission Creek, a designated Critical Habitat for the Southern California Steelhead (*Oncorhynchus mykiss*) (Federal Register, 2005). An onsite analysis of the quality of Southern California Steelhead habitat adjacent to the Project Site shows that no perennial waters or deep pools exist. Therefore, no habitat is present to support steelhead parr, sexually immature spring-run fish, or spawning. The section of Mission Creek adjacent to the Project Site may serve as a corridor for migrating adults. While this portion may support migrating adults, five barriers to steelhead movement exist along Mission Creek downstream of the Cancer Center Project Site. Concrete channelization at Chapala Street, Castillo Bridge, and Mission Street Bridge and two grade control structures at Pedregosa Street Bridge create a disconnect between the Pacific Ocean and the Project Site.

WILDLIFE CORRIDORS

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Habitat linkages may function as wildlife corridors for some species and permanent habitat for others. Wildlife corridors and habitat linkages contribute to population viability in several ways: **(1)** they assure the continual exchange of genes between populations which helps maintain genetic diversity; **(2)** they provide access to adjacent habitat areas representing additional territory for foraging and mating; **(3)** they allow for a greater carrying capacity of species populations; and **(4)** they provide routes for colonization of habitat lands following local populations extinctions or habitat recovery from ecological catastrophes (e.g., fires).

The project site is, to a large degree, within developed urbanization. All of the proposed construction is within commercial/residential land use. Terrestrial wildlife often utilize valleys, drainages, and other topographic paths of least resistance to move through a landscape. Wildlife crossings occur where animals find obstacles or hazards to movement, such as at roads, fences, and at bridges and culverts. Currently Mission Creek presents limited opportunity for some wildlife movement, likely primarily birds and urban-tolerant wildlife such as northern raccoon (*Procyon lotor*) and Virginia opossum (*Didelphis virginiana*). No impacts to wildlife corridors are anticipated as a result of the proposed construction since there would be no alteration of Mission Creek.

BIOLOGICAL IMPACTS

VEGETATION

Direct Impacts

The Cancer Center development would remove seven (7) Coast Live Oak (*quercus agrifolia*) trees. In order to off-set impacts of Oak Tree removal, the Cancer Center proposes to plant 23 replacement Coast Live Oak trees (Landscape Plan, Arcadia Studios, June 2009). The Cancer Center of Santa Barbara Tree Protection Plan (McPherson 2009) and Site Plan detail protection measures for retained and planted coast live oaks and other trees present on the property. The landscape plan as proposed, in concert with the Tree Protection Plan, would avoid residual impacts to the coast live oak tree population on-site.

Indirect Impacts

Indirect impacts to sensitive upland and wetland vegetation communities could result primarily from adverse "edge effects", which occur along the construction corridor. During construction activities, edge effects may include dust which could disrupt plant vitality in the short-term or construction-related soil erosion and water runoff. However, given the City of Santa Barbara standard best management practices (BMPs) construction-related minimization measures to control dust, erosion, and runoff, and compliance with NPDES requirements, indirect impacts on potentially jurisdictional waters of the U.S./State are not anticipated to occur. No long-term indirect impacts on vegetation are anticipated as the new construction would be essentially within existing development and the City also requires permanent storm water pollution control.

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SENSITIVE PLANTS

Direct Impacts

No special-status plant species were detected within the Plan area during biological reconnaissance survey, although the survey effort was a general biological reconnaissance survey that focused on compiling a summary of existing conditions and potential biological constraints within the study area. A focused survey effort for sensitive plants was not conducted.

However, the proposed construction is entirely within developed or disturbed areas. Therefore, no direct impacts are likely to occur to special-status plant species.

Indirect Impacts

Most of the indirect impacts to vegetation communities cited above could also affect sensitive plant species. Standard construction BMPs and construction-related minimization measures to control dust, erosion, and runoff are mandated by ordinance and will be implemented to minimize any adverse indirect impacts to plants species.

SENSITIVE WILDLIFE

Direct Impacts

As previously described, no special-status and/or sensitive wildlife species were detected within the study area during the biological reconnaissance survey. The mature trees within the study area provide potential nesting habitat for a variety of bird species. Direct impacts to any potentially nesting bird species can be avoided by construction phasing and through the provision of pre-construction nesting bird surveys and biological monitoring as mandated under the Migratory Bird Treaty Act, which ensure that special-status and/or sensitive species present within the area of project effect are not harmed. Thus, significant direct impacts to special-status and/or sensitive wildlife are not anticipated.

Indirect Impacts

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

The proposed construction area contains trees that have a moderate potential to provide roosting and foraging habitat and a very low potential for breeding habitat for Cooper's hawk.

Throughout its range, the Cooper's hawk breeds in deciduous, mixed, and evergreen forests and deciduous stands of riparian habitat (Rosenfield and Bielefeldt 1993). The Cooper's hawk breeds primarily in riparian areas and oak woodlands and apparently is most common in montane canyons (Garrett and Dunn 1981; Hamilton and Willick 1996). It is tolerant of human disturbance and habitat fragmentation and breeds in suburban and urban settings (Murphy, et al. 1988). The urban sites have included isolated trees in residential neighborhoods with commercial and recreational activities less than 150 meters distant and houses 20 to 30 meters distant. Typically, there is some forest edge habitat included within their home range even if nesting within an urban setting, and this forest edge may serve as the primary hunting site (Rosenfield and Bielefeldt 1993). This species is seldom found in areas without dense tree stands or patchy woodland habitat (Zeiner, et al. 1990). Within the range in California, it most frequently uses dense stands of live oak, riparian deciduous or other forest habitats near water (Zeiner, et al. 1990). Dense stands with moderate crown-depths are usually used for nesting (Zeiner, et al. 1990). The Cooper's hawk tends to nest in stands with lower densities of taller and larger trees and a greater proportion of hardwood cover than conifer species when compared to other accipiter species (Trexel, et al. 1999). Migrant and wintering birds may be found with regularity in developed (e.g., suburban) areas. They hunt in broken woodland and habitat edges, catching predominantly avian prey in the air, on the ground, and in vegetation.

Breeding birds can be significantly affected by short-term construction-related noise, which can result in the disruption of foraging, nesting, and reproductive activities. The proposed construction area contains trees that could provide roosting and foraging habitat for raptor species. Therefore, indirect impacts to sensitive wildlife due to construction-related noise may occur as a result of the proposed project implementation. Potential long-term indirect impacts to sensitive local wildlife could include the following: Habitat degradation from introduction or spread of invasive landscape plants; trash and debris deposition; and soil erosion and hydrological changes (*e.g.*, surface and groundwater level and quality). Please refer to the *Biological Recommendations Summary*, below, for a list of recommendations designed to minimize non-significant project effects upon biological resources.

JURISDICTIONAL WATERS OF THE U.S./STATE, INCLUDING WETLANDS

Potential waters of the U.S./State in the vicinity of proposed construction, including wetlands, are under the jurisdiction of the ACOE, CDFG, RWQCB, and County and would require permits for any impacts. However, the Project is currently designed to specifically avoid impacts to potential waters by siting within previously existing development well outside of the top of bank of Mission Creek.

ENVIRONMENTALLY SIGNIFICANT UNITS

The proposed construction is located within the South Coast Hydrologic Unit and adjacent to Mission Creek, a designated Critical Habitat for the Southern California Steelhead (*Oncorhynchus mykiss*) (Federal Register, 2005). No construction activities are to occur within 25 feet of Mission Creek bank. Critical habitat along Mission Creek would not be affected by construction related activities from Cancer Center Project Site if standard construction BMPs are observed.

WILDLIFE CORRIDORS

Direct Impacts

The proposed construction has been designed to within pre-existing development. Wildlife movement within Mission Creek, or avian movement through the remnant woodland represented by on-site trees, may be temporarily hindered by construction activities. However, the proposed construction is not expected to permanently restrict or impede wildlife movement. Therefore, direct impacts to wildlife corridors and habitat linkages are not anticipated.

Indirect Impacts

Local wildlife movement would be subject to the same existing effects described above for sensitive wildlife, including short-term construction-related noise that could alter wildlife behavior movement temporarily.

BIOLOGICAL RECOMMENDATIONS SUMMARY

The following items are recommended to ensure that the proposed Project is implemented in accordance with local, state, and federal guidelines and regulations.

1. If project construction occurs during the migratory bird nesting season (typically February through August), a focused avian nesting survey should be performed by a qualified wildlife biologist 72 hours prior to construction in accordance with the Migratory Bird Treaty Act (MBTA) (16 U.S.G. 703-712). If an active bird nest is found, the nest would be flagged and mapped on the construction plans along with an appropriate buffer, which would be determined by the biologist based on the habits and needs of the species. The nest area would be avoided until the nest is vacated and the juveniles have fledged. The nest area would be demarcated in the field with flagging and stakes or construction fencing.

2. All site preparation and construction activities should incorporate standard BMPs including, but not limited to, straw bales, gravel bags, sand bags, the periodic wetting of bare areas to reduce dust, and the direction of construction area drainage to existing storm drain facilities.

3. All equipment maintenance, staging areas, and dispensing of fuel, oil, or other toxicants should occur in designated upland areas outside of any adjacent waters of the U.S. or other biologically sensitive habitat and incorporating adequate spill prevention and containment.

4. Prevent attracting wildlife to construction and other hazardous areas by providing covered trash receptacles and construction waste material containers during all activities

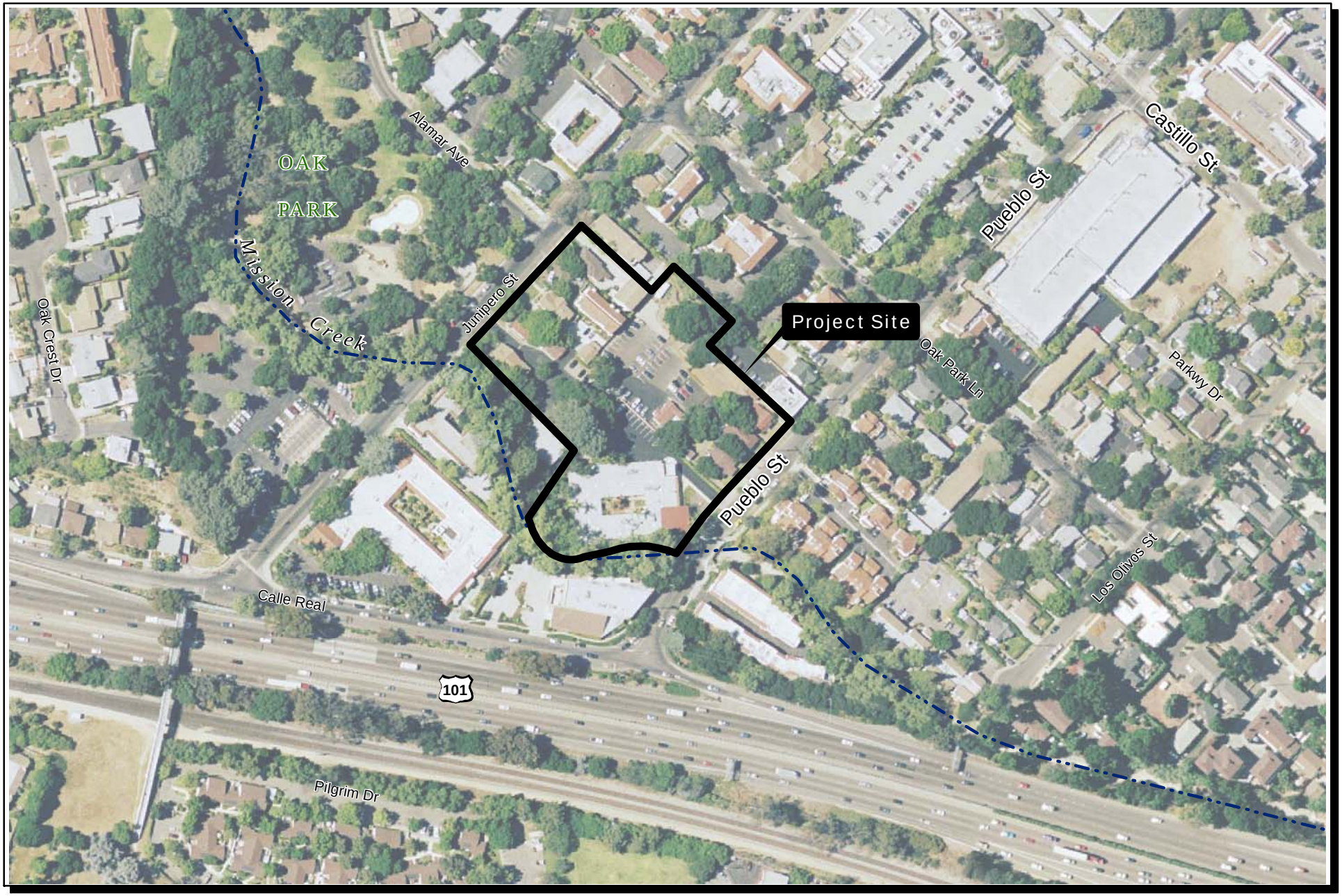
If you have any questions or comments regarding the content of this letter please do not hesitate to contact me via telephone at (661) 705-4566 or via e-mail at fobregon@dudek.com.

Sincerely,

FM Obregon
Biologist

cc: *Jonathan Leech, Dudek*

att: *Figure 1 - Project Site & Vicinity*
Figure 2 – Site Plan
Table 1 – Sensitive Plant Species of the Region
Table 2 – Sensitive Animal Species of the Region
Appendix A – Plant and Animal Species Observed During Survey
Appendix B – Steelhead Trout Habitat Assessment



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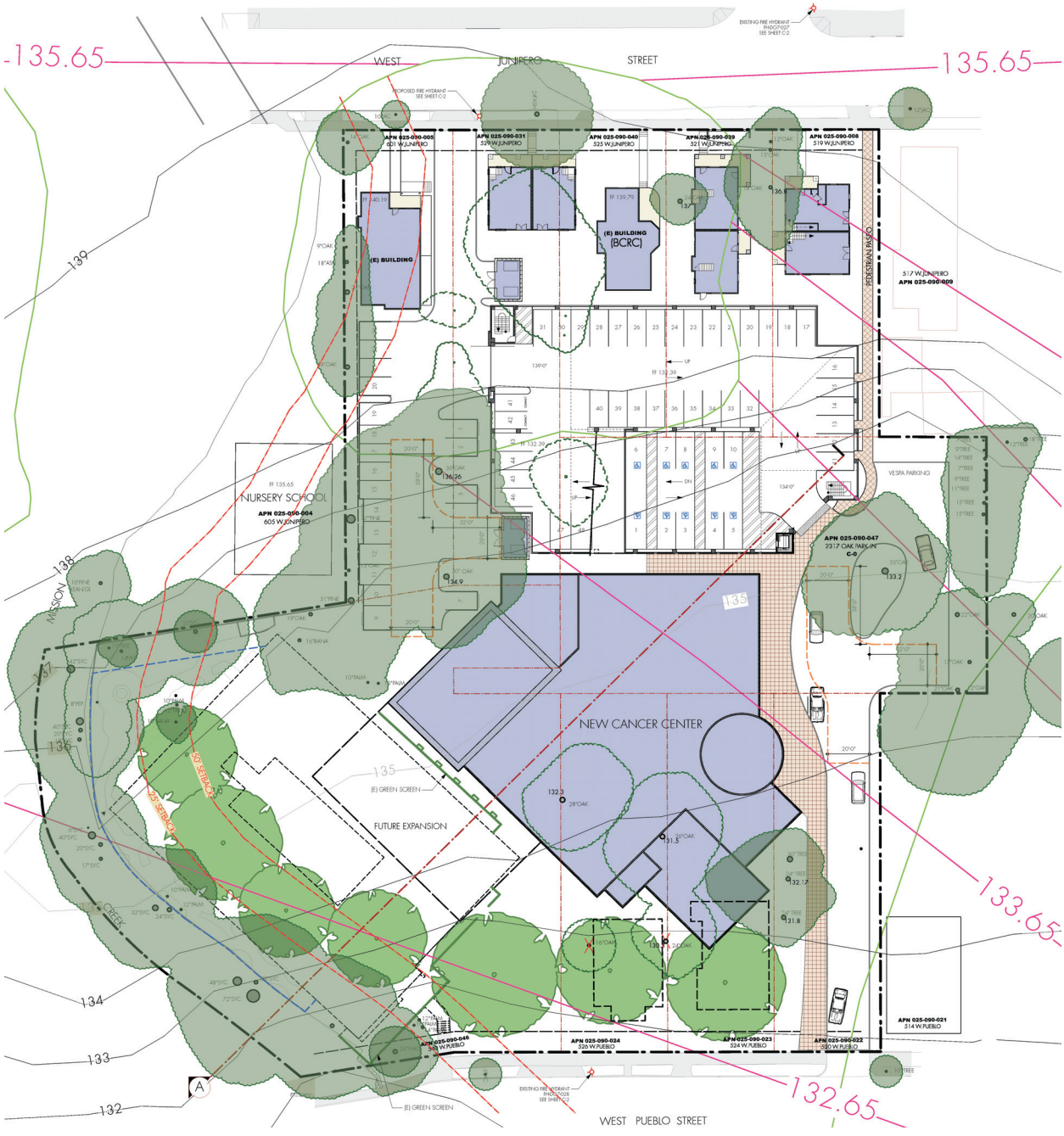
0 500 Feet

Draft Biological Resources Survey - Santa Barbara Cancer Center

Project Site and Vicinity

FIGURE 1



Source: Boulder Associates Architects, Cearnal Andrulaitis Interior Design

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Draft Biological Resources Survey - Santa Barbara Cancer Center

Site Plan

FIGURE 2

TABLE 1
Sensitive Plant Species Detected or Potentially Occurring within Survey Area
Based on California Natural Diversity Database Search of Adjacent Quadrangles

Scientific Name	Common Name	Federal/ State Status	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Status Onsite or Potential to Occur
Atriplex coulteri	Coulter's saltbush	-- / --	1B.2	Alkaline or clay soils in open or coastal scrub habitats	No suitable habitat.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	-- / --	1B.2	Alkaline or clay soils on coastal bluffs	No suitable habitat.
Calochortus weedii var. *vestus*	Late-flowered mariposa-lily	-- / --	1B.2	Dry, open coastal woodland and chaparral	No suitable habitat.
Calystegia sepium ssp. *binghamiae*	Santa Barbara morning glory	-- / --	1A	Coastal marshes	No suitable habitat
Delphinium umbraculorum	Umbrella larkspur	-- / --	1B.3	Mesic oak forest, 400-1,600 meters AMSL.	Very low potential due to lack of suitable habitat.
Horkelia cuneata ssp. *puberula*	Mesa horkelia	-- / --	1B.1	Dry, sandy coastal chaparral, dunes	No suitable habitat
Lonicera subspicata var. *subspicata*	Santa Barbara honeysuckle	-- / --	1B.2	Chaparral slopes below 1,000 meters AMSL	No suitable habitat
Quercus dumosa	Nuttall's scrub oak	-- / --	1B.1	Sandy soils and sandstone near coast in chaparral and coastal sage scrub	Not present on site
Scrophularia atrata	Black-flowered figwort	-- / --	1B.2	Calcareus, diatomaceous soils near coast	No suitable habitat
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern	-- / --	2.2	Wetlands, riparian areas, seeps, meadows.	Very low potential due to marginal creek habitat.
Thermopsis macrophylla	Santa Ynez false lupine	-- / Rare	1B.3	Grassland, chaparral, sandy disturbed areas	No suitable habitat.

Legend

FE:	Federally-listed as endangered	FT:	Federally-listed as threatened
SE:	State-listed as endangered	ST:	State-listed as threatened
SCE:	State candidate for listing as endangered	SR:	State rare

TABLE 2
Sensitive Wildlife Species Detected On-Site or Potentially Occurring within Survey Area Based on California Natural Diversity Database Search of Adjacent Quadrangles

Scientific Name	Common Name	Status Federal/State[1]	Primary Habitat Associations	Status Onsite Or Potential To Occur
INVERTEBRATES				
Coelus globosus	Globose dune beetle	-- / --	Fore dunes and sand hummocks from Central California to Baja California, Mexico.	No suitable habitat.
Danaus plexippus	Monarch butterfly	-- / --	Open habitats including fields, meadows, marshes, roadsides, adults feed on flower nectar.	Low potential –roosting habitat exists on site (planted *Pinus torreyana*) though open habitat onsite is limited.
FISH				
Oncorhynchus mykiss	Southern California Steelhead	FE / --	Coastal river and creek lagoons.	Very low potential – multiple passage barriers lower on Mission Creek.
Eucyclogobius newberryi	Tidewater goby	FE / --	Coastal river and creek lagoons.	Very low potential – no perennial flow on site.
AMPHIBIANS				
Rana aurora draytoni	California red-legged frog	FT / --	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Low potential due to lack suitable habitat on site, however adjacent creek contains limited shrubby or emergent vegetation.
REPTILES				
Thamnophis hammondii	Two-striped garter snake	-- / --	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Low potential - suitable habitat within limited portions of Study Area.
BIRDS				
Accipiter cooperii (nesting)	Cooper's hawk	-- / CSC	Riparian and oak woodlands, montane canyons	Moderate potential to forage or roost within on site trees. Low potential to nest onsite due to high commercial and industrial density in the Study Area.
Charadrius alexandrinus nivosus (Pacific coastal population)	Western snowy plover	FT / --	Coastal beaches, river plains, salt ponds; nests above high-tide line of beaches, dunes, salt pans	No suitable habitat

TABLE 2
Sensitive Wildlife Species Detected On-Site or Potentially Occurring within Survey Area Based on California Natural Diversity Database Search of Adjacent Quadrangles

Scientific Name	Common Name	Status Federal/State[1]	Primary Habitat Associations	Status Onsite Or Potential To Occur
Riparia riparia	Bank swallow	-- / ST	Nest burrows in riverbank cliffs, gravel pits, roadway cuts; forages over nearby water.	Low potential due to lack of sufficient marginal nesting habitat, foraging likely.
MAMMALS				
Nyctinomops macrotis	Big free-tailed bat	-- / --	Rocky outcrops, cliffs, and crevices with access to open habitats for foraging.	Low potential to roost onsite in structures. May forage overhead.

[1]The federal and state status of species is primarily based on the Special Animals List (February 2008), California Department of Fish and Game.

Federal Designations:

FE Federally-listed Endangered
FT Federally-listed as Threatened

State Designations:

SE State-listed as Endangered
ST State-listed as Threatened
CSC California Special Concern Species
FP California Department of Fish and Game Protected and Fully Protected Species

APPENDIX A

Plant and Animal Species Observed During Survey

PLANTS OBSERVED

Acacia longifolia – Sydney golden wattle*
Anagallis arvensis – scarlet pimpernel*
Bromus diandrus – ripgut grass*
Bromus sp. – Brome grass*
Brugmansia sp. – angel's trumpet*
Capsella bursa-pastoris – shepherd's purse*
Chamaesyce maculata – spotted spurge*
Chamomilla suaveolens – pineapple weed*
Conyza canadensis – horseweed*
Cynodon dactylon – Bermuda grass*
Erodium botrys – filaree*
Erodium cicutarium – red-stemmed filaree*
Euphorbia peplus – petty spurge*
Geranium molle – crane's bill geranium*
Hedera helix – English ivy*
Helianthus annus – sunflower (cultivar form)
Helianthus gracilentus – slender sunflower
Hirschfeldia incana – short-podded mustard*
Hordeum marinum – Mediterranean barley *
Lonicera sp. (cult) – honeysuckle*
Malva parviflora – cheeseweed*
Melilotus indicus – yellow sweet clover*
Myoporum laetum – myoporum*
Oxalis corniculata – yellow sorrel*
Phyllostachys aurea – golden bamboo*
Phyllostachys sp. – date palm
Pinus torreyana – Torrey pine (planted)
Piptatherum miliaceum – smilo grass*
Plantago sp. – plantain†
Platanus racemosa – western sycamore
Quercus agrifolia – coast live oak
Raphanus sativus – wild radish*
Ricinus communis – castor bean*
Rosmarinus officinalis – rosemary*
Rubus sp. – blackberry*
Salvia sp. – sage†
Silybum marianum – milk thistle*
Stellaria media – chickweed
Taraxacum officinale – common dandelion*
Vinca major – greater periwinkle*

* Denotes non-native species
† Denotes unknown nativity

WILDLIFE OBSERVED

Calypte anna - Anna's hummingbird
Carpodacus mexicanus - house finch
Catharus guttatus – hermit thrush
Columba livia - rock dove
Corvus brachyrhynchos – American crow
Dendroica coronata – yellow-rumped warbler
Dendroica petechia – yellow warbler
Melanerpes formicivorus – acorn woodpecker
Passer domesticus – European house sparrow
Psaltriparus minimus - bushtit
Sayornis nigricans – black phoebe (paired)

APPENDIX B

Southern Steelhead Habitat Assessment Forms

Southern Steelhead Trout Habitat Assessment

Project/Site: Cancer Center
City/County: Santa Barbara
Sampling Date: 5/29/08
Applicant/Owner:
State: CA
Sampling Point: Mission Creek Trib. Project
Investigator(s): F M Obregon
Section, Township, Range:
Landform (hillslope, terrace, etc.): Mission creek
Local relief (concave, convex, none): Concave
Slope (%): 1-5
Subregion (LRR):
Lat: 34°25'58.44" Long: 119°43'32.34" Elv 130ft
Datum:
Soil Map Unit Name:
NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes) No (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? (Yes) No
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS

Describe Vegetation. Riparian, modified
Describe Soil Present. Sand, loose to medium sized stones
Describe Hydrology Present. None, Summer without flow

Remarks:
Mission creek receives seasonal flows.
Currently no water is running on the surface

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. PlaRac	35		
2.			
3. QueAgr	15		
4. MyoLae / Misc Orn trees	15		
Total Cover:			

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. None with creek			
3.			
4.			
5.			
Total Cover:			

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. Umbrella sedge	P.gMil	all <1%	
3.			
4. CynDac	Tarax Off		
5. unk mint			
Total Cover:			

Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. Rubus sp.	@ edge	5-10%	
Total Cover:			

% Bare Ground in Herb Stratum: % Cover of Biotic Crust:

Remarks:

Streambed is relatively unveg though banks are densely veg w/ non-native plants common to disturbed urban landscapes.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water	___ Salt Crust	___ Sediment Deposits
___ High Water Table	___ Biotic Crust	___ Drift Deposits
___ Saturation	___ Aquatic Invertebrates	___ Drainage Patterns
X Water Marks	___ Dry-Season Water Table	X Water-Stained Leaves
___ Oxidized Rhizospheres along Living Roots	___ Thin Muck Surface	___ Surface Soil Cracks
___ Water Marks	___ Drift Deposits	

Field Observations:

Surface Water Present?	Yes	(No)	Depth (inches):
Water Table Present?	Yes	(No)	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	(No)	Depth (inches): within top 5"

Remarks:
- Gravel mixed with loam creek substrate
- med/lrg rocks present

Describe flow from ocean (office):

- gravel is 0.1cm < x < 3cm

Physical Barriers

- Chapala St. Crossing @ UPRR
- Castillo Bridge / Arrellage Bridge
- Pedregosa St. Bridge (d/s)
- under Pedregosa St Bridge
- Mission St → Los Olivos St (d/s)

- No pooling present or flows
- Depth of water not measurable
- Creek remains similar throughout immediate reach.
- some pooling potential possible w/ enough water